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## NIGERIA

# Report on the Medical Services for the year 1939

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# Report on the Medical Services for the Year 1939

## I.—ADMINISTRATION

### A.—STAFF

1. The outbreak of war had its effect on the Medical Department as on all other departments. Earlier in the year it had been decided to form a Field Ambulance officered by the staff of the department. This was done, and the unit underwent daily training prior to embodiment. It was fortunate that in the Sleeping Sickness Service we had Regular Army Non-Commissioned Officers. A certain number of these were at once attached to the Field Ambulance.

2. Apart from the Medical Officers serving with the Field Ambulance others have been attached to the battalions of the Nigeria Regiment and the department is now carrying on its usual duties with a depleted staff.

3. The year has seen the completion of the division of the country into eight medical administrative areas each under a Senior Medical Officer. These officers make regular tours of their areas, and are thus in a position to advise headquarters of local requirements. The principle to be followed is that headquarters will formulate the general policy, while the detailed working out of the policy will be a matter for the Senior Medical Officers subject to supervision from headquarters. Matters of local policy should be more expeditiously dealt with than in the past.

4. Considering the abnormality of the times the new divisional administrative movement has functioned fairly satisfactorily. It is hoped slowly to increase the powers of the officers in charge of divisions.

5.

### B.—FINANCIAL

#### FINANCIAL YEAR 1938-39

##### *Revenue*

							£	s.	d.
Medical receipts	...	...	...	...	...	...	9,161	18	7
Births and deaths registration fees	...	...	...	...	...	...	35	18	0
Fumigation and deratisation fees	...	...	...	...	...	...	99	5	3
Sale of departmental stores	...	...	...	...	...	...	1,235	5	8
Sale of anti-rabic vaccine	...	...	...	...	...	...	95	12	2
Sanitary dues under the Quarantine Ordinance	...	...	...	...	...	...	986	10	2
							£11,614	9	10

##### *Expenditure*

							£	s.	d.
(a) Personal Emoluments	...	...	...	...	...	...	268,601	14	0
(b) Other Charges:—									

##### (1) MEDICAL

							£	s.	d.
Medical, surgical, dental, X-ray, equipment and laundry	...	...	...	...	...	...	36,442	13	4
Hospital diets	...	...	...	...	...	...	10,888	10	10
Labour	...	...	...	...	...	...	15,639	18	7

(2) LABORATORY

Labour	...	...	...	...	418	6	9
Other expenditure	...	...	...	...	1,262	14	9

(3) HEALTH

Labour	...	...	...	...	23,126	0	5
Other expenditure	...	...	...	...	11,170	16	5

(4) GENERAL

Railway transport	...	...	...	...	9,821	17	8
Other items under Other Charges	...	...	...	...	35,901	11	9

£ s. d.

(c) Special Expenditure:—

Sleeping Sickness Service	...	...	...	...	...	40,620	2	0
Medical Stores Reserve	...	...	...	...	...	3,246	9	10
Other items under Special Expenditure	...	...	...	...	...	1,243	15	3

£45,110 7 1

## II.—PUBLIC HEALTH

### A.—GENERAL REMARKS

6. A re-orientation on the part of the people in their ideas of the relative importance of the preventive and curative branches of medicine is everyday more essential. Particularly in the tropics is this the case because of the number of diseases which are preventable *e.g.* yaws, infestation with intestinal parasites, water-borne diseases such as schistosomiasis and guinea worm, etc. That the present curative facilities are woefully inadequate is well realised, but if real advance is to be made the spectacular curative side must not be allowed to eclipse the more essential preventive aspect.

7. The success of the sleeping sickness campaign has shown what can be accomplished by a well organised mass attack on a particular disease, and it is hoped to pursue a similar policy of attack against other wide-spread epidemic diseases. This can be done with the firm conviction of ultimate success.

8. A great deal more can be done through the native administration dispensaries. While in no way decrying the work being done, the help at present being given can at best be only palliative. These should become—as was originally intended—vital health centres. In addition to the Dispenser we hope for Midwife-Health Visitors and Sanitary Advisers, whose function it will be to follow up cases from the dispensary, explaining the sanitary defect that caused the disease and pointing out the remedy by attention to simple health rules easy of application.

## B.—MEDICAL EDUCATION

9. The Medical School continues to make steady progress.

10. The change over to a course modelled on that given by British colleges makes teaching at present somewhat difficult. The school contains twenty medical students and thirteen medical assistants. This latter group comprises the original students of the school who, after two years clinical study, served in the larger hospitals for two years and then returned to the school for a refresher course of one year before sitting the examination for the Diploma of the Licentiate. The medical students continue at the school until they have taken their diploma and then hold house appointments for two years after qualification before becoming registered as practitioners. It is expected that the Medical Assistant group will be finished with in 1941 and the overlapping in teaching will then be at an end.

11. Eleven students have up to date qualified as Medical Practitioners, six qualifying in 1939.

12. The December examination was postponed until January to allow of the presence of Sir Richard Needham, who came out from the General Medical Council to investigate and report on the working of the school. The school should benefit greatly by his advice.

13. For the first time in its history external examiners co-operated with the teaching staff in the conduct of the final examinations. These external examiners were Dr Harkness and Dr McLagen of the Gold Coast Service.

14. A further step in the progress of the school is its recognition by the Government of the Gambia as a training place for Gambian students.

## C.—SCHOOL OF PHARMACY

### *Students*

15. At the beginning of the year thirty students were in attendance, of whom twelve were preparing for the Chemist and Druggist Examination and eighteen for the Dispensers' Qualifying Examination.

### *Examinations*

16. Statutory examinations were held in June and the results were as follows:—

(a) *Dispensers' Qualifying Examination—Part I.*—Nine candidates—eight successful (including one candidate who was referred in Inorganic Chemistry, but who subsequently passed in November).

(b) *Chemist and Druggist Examination.*—Twelve candidates—four successful.

### *Hydnocarpus Oil Preparations.*

17. During the year, 1,700 "reputed quart" bottles of filtered hydnocarpus oil with four per cent creosote and 269 "reputed quart" bottles of ethyl esters with four per cent creosote were sent to the medical stores for dispatch to leper hospitals.

## D.—LUNACY

18. It must be conceded that the provision for lunatics at present available in Nigeria is totally inadequate.

19. The small asylum at Yaba is in a dilapidated condition, poorly sited, and such that no gradation is possible; noisy and quarrelsome inmates being grouped with quiet and harmless patients. The retention of lunatics in the various prisons is at the present day an anachronism. Under these conditions the prospect of cure is remote.

20. We have in view a site near Lagos which will have the additional advantage of affording opportunity of useful study to the students of the Medical School thus giving them the power of sympathetic and scientific approach to sufferers when they go out in practice throughout Nigeria.

#### E.—GENERAL DISEASES

21. The growth of the hospital work of the department since 1928 is indicated by the following summary:—

Total cases treated	1933	1938	1939
<i>European:</i>			
In-patients	... ...	1,030	1,536
Out-patients	... ...	6,058	8,469
<i>African:</i>			
In-patients	... ...	45,233	63,048
Out-patients	... ...	570,607	645,780

22. The steady increase in African patients proves decisively the growing appreciation of the people for the care given.

23. The most frequent cause of admission of Europeans to hospital was malaria, representing a percentage of 22.5 of all admissions. The group of dysenteries and diarrhoeas represents a percentage of 7. The other main groups were digestive, respiratory and skin conditions. It is noteworthy that twenty-five cases of appendicitis were treated in in-patients.

24. Among African in-patients the commonest group was that of venereal diseases with a percentage of 12.65 of total admissions. This is a deplorable fact and one which calls for a mass attack on this scourge. Diseases of the skin and bones take second place with a percentage of 12.2. The other commonest causes of admission were injuries, malaria, helminthiasis, and the dysentery-diarrhoea group.

25. Among out-patients the commonest complaints were diseases of skin and bone, injuries, respiratory and digestive troubles, rheumatism and venereal diseases.

26. *Leprosy.*—The most encouraging work of the year has been accomplished in the sphere of leprosy control. This work is yet in its early stages in Nigeria, but a number of settlements under Mission management are now actively engaged in it. Their activities are no longer limited merely to the treatment and care of their resident patients, but their help has been extended to the surrounding villages where, with the co-operation of the people, they have established clinics and treatment centres and undertaken surveys and propaganda work. The Uzuakoli and Oji River Settlements have done specially noteworthy work of this kind and the other large settlements in the south and some in the north are entering into this sphere. The general adoption and growth of this policy will in

time make each provincial settlement the centre of leprosy control for the whole of the province. The settlement will no longer be an isolated unit, but a centre whose influence will radiate in all directions into the surrounding territory.

27. One outstanding feature of the year was the Leprosy Conference held at Enugu in August. This was attended by Superintendents of leper settlements and officers of the Administrative, Agricultural, Education and Medical Departments. Dr Muir of the British Empire Leprosy Relief Association attended and gave valuable advice.

28. It is hoped in time that Provincial Boards will function throughout Nigeria, in order that the most efficient methods for control of the disease shall be applied.

29. The success of the voluntary system of segregation as practised in Nigeria has been evidenced by the increasing demand for admission to the settlements. The number of inmates has risen from 2,500 ten years ago to approximately 7,000 to-day. The settlement *per se*, however, is not enough. Work outside must be accomplished. In the settlement itself segregation must be definitely selective to be of value in the campaign. In some it is regretted that this is not the case. The value of the cured patient as a means of propaganda is most important.

30. Efficient co-operation is essential and, to obtain this, education on the subject of leprosy and its control is all important. Such education must be given to school teachers, sanitary inspectors, missionaries, chiefs, village authorities and patients themselves, so that they can pass on the lessons learned. These people by their close contact and their knowledge of the language can be of the greatest help in impressing the facts of leprosy, its dangers and its means of control on the village populations.

#### F.—NATIVE ADMINISTRATION DISPENSARY SYSTEM

31. The native administration dispensaries grow in number and in usefulness. There were 359 dispensaries at the end of the year. Of these 126 were in the Northern Provinces and 233 in the Southern Provinces. These figures are to be compared with 121 and 216 in 1938.

32. The figures given below are proof of the steady increase in work done.

	Northern Provinces		Southern Provinces		
	1938	1939	1938	1939	
Cases treated	...	396,891	401,007	691,505	988,772
Attendances	...	1,870,185	1,925,951	2,477,015	3,291,042

#### III.—VITAL STATISTICS

33. Registration of births and deaths has been in force within the Lagos municipal area since 1867. Outside Lagos, registration is compulsory in defined limited areas at Kano, Calabar, Port Harcourt, Enugu, Aba, Minna, Abuja, Bida and Kontagora in accordance with the Births, Deaths and Burials Ordinance. Some native authorities have made regulations under the "omnibus clause" of the Native Administration Ordinance for the registration of births and deaths in their area. The Egba Division of Abeokuta Province, Makurdi, Oyo and Ife towns have made orders to this purpose. A fairly reliable system of death

registration has been in operation for some years in the Ijebu Province. Other native and local authorities, such as Jos, have kept births and deaths returns for many years; but such returns cannot be accepted as very reliable.

34. The following table shows comparative vital statistics for Lagos Township for the last two years. The figures do not include non-native statistics or native births or deaths which have occurred outside the township though registered in Lagos:—

					1938	1939
Estimated population	...	...	...	...	158,500	160,700
Births (live)	...	...	...	...	4,288	4,980
Crude birth-rate	...	...	...	...	27.0	30.98
Corrected birth-rate	...	...	...	...	24.0	27.6
Deaths	...	...	...	...	2,513	2,508
Crude death-rate	...	...	...	...	15.8	15.6
Corrected death-rate	...	...	...	...	21.6	21.4
Deaths under age of 1 year	...	...	...	...	545	631
Infant mortality rate	...	...	...	...	127	127
Still births	...	...	...	...	157	167
Rate of still births per 100 live births	...	...	...	...	3.6	3.4
Deaths from diseases of pregnancy and childbirth	...	...	...	...	34	42
Maternal mortality rate (per 1,000 live births)	...	...	...	...	7.9	8.4

35. Based on population figures computed from a formula prepared by the Government Statistician in 1931, "corrected" births and deaths for the Lagos municipal area are given below for some of the last twenty-eight years:—

Year	1911	1916	1921	1926	1931	1936
Birth-rate	29.5	24.9	24.5	24.1	22.0	23.7
Death-rate	36.6	30.3	31.1	34.0	17.4	18.9

36. There was a total of 631 deaths of infants under the age of one year in Lagos during 1939, causes of death given including pneumonia or bronchitis (192), prematurity (74), infantile convulsions (49), congenital debility (38), malaria (34), diarrhoea and enteritis (25), umbilical sepsis (11). The last is a reminder of the uncleanly methods that are still observed in the homes of the people.

37. As compared with thirty-four in 1938, deaths of mothers in Lagos from causes directly connected with pregnancy and labour were forty-two in 1939, ten being from puerperal sepsis.

38. At all ages, 17.3 per cent of all deaths in Lagos during 1939 were attributed to pneumonia, seven per cent to tuberculosis (all forms), 5.7 per cent to diarrhoea and enteritis, 4.5 per cent to malaria, 2.3 per cent to nephritis, two per cent to tetanus and one per cent to malignant disease.

#### IV.—HYGIENE AND SANITATION

##### GENERAL REVIEW OF WORK DONE AND PROGRESS MADE

###### I.—PREVENTIVE MEASURES

###### (i) Mosquito and Insect-borne Diseases

###### (a) Malaria.

39. The Senior Health Officer reports unusually high prevalence of malaria owing to heavy rains in the Northern Provinces in 1939.

40. In Lagos, the Pathologist found malaria to have caused death in twenty-nine cases out of 186 post-mortem examinations held on bodies of children who died within the first three years of life. Of these twenty-nine cases of fatal malaria seventeen were of the cerebral type and two were associated with haemoglobinuria.

(b) *Yellow Fever.*

41. There were eight cases of yellow fever seen during 1939, of which seven proved fatal, one European recovering. Two of the seven fatal cases were in Africans. Three of the cases occurred in the same neighbourhood about the same time—a gold mining area astride the Kabba-Ilorin boundary. The recovered case was one of three that occurred in 1938-39 in a leper settlement in south-western Nigeria. The other four cases occurred in widely separated localities, namely, Warri, Oshogbo, Ikoidong in the Abak District of Calabar Province, and Rahama at the foot of the Jos Plateau. None of the non-native victims resided in a Government residential area where health protective segregation was available.

(c) *Typhus Fever.*

42. Four cases of typhus including three Europeans and one African were notified in the Northern Provinces, one case being in Sokoto, the others in Hadeija.

(d) *Trypanosomiasis.*

43. A special report is given as an appendix for the Sleeping Sickness Service of Nigeria.

(e) *Dengue.*

44. Only one case came to notice during the year.

(f) *Relapsing Fever.*

45. Two cases, in Lagos, were demonstrated.

(ii) *Epidemic Diseases.*

(a) *Plague.*

46. No plague, human or rodent, has been discovered in Nigeria since 1931.

(b) *Smallpox.*

47. A total of 4,967 cases with 653 deaths, representing a case mortality of just over thirteen per cent, were notified during the year.

48. The returns of vaccinations performed in different localities add up to a total of 1,226,268. The local production of vaccine lymph has continued satisfactorily.

(c) *Cerebro-spinal meningitis.*

49. 276 cases were notified with 236 deaths. The practice of maintaining emergency stocks of the sulphanilamide preparations at five conveniently situated depots to serve outlying areas in Northern Provinces has been continued.

(d) *Enteric fever.*

50. The total of twenty-nine cases of enteric fever seen and notified by medical officers is surprisingly small considering the environmental conditions of most of the population.

(e) *Dysentery.*

51. In the Northern Provinces 1,349 cases with 191 deaths came to the notice of the health authorities. In the Cross River area a total of 2,345 cases with ninety-seven deaths were reported.

52. At the Lagos pathological laboratories, 4,836 specimens of human faeces showed:—

Free <i>Entamoeba Hystolitica</i>	in 16 cases
Cysts of „ „ „	,, 2 „
<i>B. dysenteriae</i> Flexner	,, 28 „
„ „ Shiga	,, 1 case
„ „ Schmits	,, 8 cases
„ „ Sonne	,, 1 case
„ „ Newcastle	,, 1 „

(f) *Yaws.*

53. It has not been possible during 1939 to establish mass treatment teams which present the only way of effectively attacking this widespread endemic disease. It is hoped that funds for this purpose will be forthcoming from the Colonial Development and Welfare Grant by the Imperial Government.

(iii) *Other Diseases*

(a) *Tuberculosis.*

54. A total of 924 cases of tuberculosis (all forms) with 287 deaths were notified from all medical stations during the year. There were a total of 198 deaths from tuberculosis in 148 of which the lungs were involved with or without generalized dissemination. The total number of (native) deaths in Lagos was 2,515 and those from tuberculosis, therefore, represent 7.8 per cent of the total mortality.

(b) *Pneumonia.*

55. The new chemotherapeutic preparations have vastly reduced the mortality of hospital cases of the above disease; these cases, however, are a very small minority of the general incidence and 433 deaths from pneumonia recorded in Lagos represent sixteen per cent of all deaths for the year and 1.6 per thousand of the population.

(c) *Rabies.*

56. Canine rabies was demonstrated by the pathologist in tissues from thirty-three dogs, nineteen of which were from Bamenda in the Cameroons. Four human cases were confirmed by pathological examination post-mortem.

Tissue specimens from one cat were also found positive.

(iv) *Helminthic Diseases*

57. Control of helminthic infections depends on better water supplies, better methods of sewage disposal and popular health education. Progress is being made along these lines, but such progress is necessarily slow and gradual.

II.—GENERAL MEASURES

(a) *Sewage Disposal*

58. Improvement in nightsoil sanitation can be recorded in numerous directions all over the country, even though a considerable proportion of the population continues to use the ground surface indiscriminately, thus helping the cycle of helminthic and intestinal disease to be maintained.

(b) *Refuse Disposal*

59. The methods of disposal have continued to be incineration and controlled dumping and more and more rural areas have had simple incinerators provided to which the inhabitants bring their refuse. Apart from their effect in reducing fly and rat prevalence, simple methods of refuse disposal have a useful health education value.

60. In Lagos, controlled tipping of refuse was made use of in the reclamation by filling of the Idumagbo lagoon. With the completion of this reclamation in the course of the year, ten acres of decomposing, more or less stagnant fluid matter have been replaced by a green open space contributing to the vast improvement brought about in this part of the island, which was a bad slum area and a plague focus during the years 1924-1930.

(c) *Water Supplies*

61. In so far as funds permit improvements to water supplies both as regards quality and quantity continue. Well sinking operations also proceed, the Geological Department having completed new wells during the year as follows: Aba 9, Kano 12, Katsina 30, Owerri 9, Anchau Settlement 22 and Sokoto 10.

(d) *Clearing of Bush and Undergrowth*

62. This unfortunately necessary measure in and around stations constitutes a heavy annual recurrent charge on votes available for labour.

### III.—SCHOOL HYGIENE

63. It has not been found possible yet to establish a whole-time staff of school medical officers in Nigeria. Government middle schools and Government colleges, however, have been inspected periodically by Government Medical Officers or Medical Officers of Health, and facilities have been available for the treatment of pupils within the school or at the local hospital.

### IV.—LABOUR CONDITIONS

64. The sanitation of the tin mining labour camps on the Plateau has remained reasonably satisfactory during the year, but the problem of the adjoining "trading camps" which are outside the control of the mining management had not been solved by the end of the year, though practical proposals have now been made to meet the case of these areas. The position in most gold mining camps remains unsatisfactory.

### V.—AFRICAN HOUSING

65. Apart from the improved labour housing already referred to in connection with "Labour Conditions", much of the housing provided by the big employers of labour—including Government—for their employees remains very poor. Greater interest in town planning and improved housing is manifest and many local authorities have been busy with the preparation of draft building regulations for their areas. The Lagos Executive Development Board has continued with its useful work of acquisition, demolition and replanning of the slum areas on Lagos island.

### VI.—FOOD IN RELATION TO HEALTH AND DISEASE

66. Gross avitaminosis is not frequent, but varying partial deficiencies in dietaries are common in different parts of Nigeria and no doubt have an influence on the incidence and course of such endemic conditions as ulcers, leprosy, etc. The Senior Health Officer states that in Northern Nigeria "conditions are such

that at the end of the long dry season there is a shortage of fresh green food and there may be a shortage of all foods before the new harvest is available". No serious food shortages have resulted from the war to date.

#### VII.—TRAINING OF HEALTH PERSONNEL

67. The various training schools for Health Inspectors, with the exception of Umudike which had to be closed in April, 1939, have continued in operation. The following numbers passed out during the year:—Ibadan—20; Umudike—24; Kano—8.

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#### V.—PORT HEALTH WORK AND ADMINISTRATION

68. An area twelve miles in radius around Oshogbo and the port and town of Warri were declared infected owing to a case of yellow fever at each place. While quarantine continued, mail planes stopped calling at the Oshogbo aerodrome, which is five miles out of the town.

69. No case of notifiable infectious disease was found on board any ocean-going vessel calling at Lagos, the main port of Nigeria, there having been 825 arrivals at and 841 departures from this port of such vessels during 1939. Calls of ocean-going ships at other ports in Nigeria were as follows: Port Harcourt 319, Calabar 236, Victoria 145, Sapele 140, Warri 125, Burutu 132, Forcados 62.

70. At the three anti-amaryl aerodromes disinsectisation of planes has been regularly carried out.

71. At the Apapa International Seafarers' Clinic, Port of Lagos, a total of 2,819 seamen of all nationalities availed themselves of the prophylactic facilities provided, and 140 cases of venereal disease, mainly gonorrhœa, were treated.

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#### VI.—MATERNITY AND CHILD WELFARE

72. Maternity and child welfare activities have continued to expand. During 1939 the total African cases of labour increased to 5,165 cases, outstanding advances being shown by the Lagos (Massey Street) maternity home with 1,517 cases, Akure with 318 cases, Aba maternity centre with 560 cases, Calabar with 310 cases, Ilorin with 384 cases. The Lagos figures represent more than twenty-five per cent of the total number of births (4,980) occurring in Lagos municipal area during the year.

73. Considerable progress continued in Ondo Province where ante-natal clinics and post-natal welfare work are based on the various dispensaries, staffed by Grade II midwives, trained in the Akure hospital and employed by the Native Administrations of the Province. A new centre with resident midwives has been opened in Ondo town.

74. The total attendances recorded for the 200 infant welfare clinics held in Lagos during the year is 10,267. Twenty-four motherless infants were brought to the clinics in the course of the year.

## RETURN OF DISEASES AND DEATHS FOR THE YEAR 1939

## EUROPEANS AND AFRICANS

Disease	Total In-patients treated	Total Deaths in In-patients	Total Out-patients	Total Deaths in Out-patients
1. (a) Typhoid fever.. .. ..	32	6	11	-
(b) Paratyphoid fever .. ..	1	-	1	-
2. Typhus .. .. ..	5	-	7	-
3. Relapsing fever .. .. ..	1	-	-	-
4. Undulant fever .. .. ..	-	-	-	-
5. Smallpox .. .. ..	338	43	114	2
6. Measles .. .. ..	58	-	179	-
7. Scarlet fever .. .. ..	-	-	48	-
8. Whooping cough .. .. ..	18	-	444	-
9. Diphtheria .. .. ..	2	-	-	-
10. Influenza :—				
(a) with respiratory complications	199	2	1,141	-
(b) without respiratory complications	1	-	-	-
11. Cholera .. .. ..	-	-	-	-
12. Dysentery :—				
(a) Amoebic .. .. ..	871	69	2,415	1
(b) Bacillary .. .. ..	131	29	77	-
(c) Unclassified .. .. ..	381	50	2,266	4
13. Plague :—				
(a) Bubonic .. .. ..	-	-	-	-
(b) Pneumonic .. .. ..	-	-	-	-
(c) Septicaemic .. .. ..	-	-	-	-
14. Acute poliomyelitis .. .. ..	6	1	8	-
15. Encephalitis lethargica .. .. ..	4	-	2	-
16. Cerebro-spinal fever .. .. ..	32	17	9	-
17. Rabies .. .. ..	10	8	1	-
18. Tetanus .. .. ..	143	66	32	2
19. Tuberculosis of the respiratory system	609	177	387	1
20. Other tuberculous diseases .. ..	212	28	247	-
21. Leprosy .. .. ..	537	12	803	-
22. Venereal diseases :—				
(a) Syphilis .. .. ..	5,118	59	16,982	-
(b) Gonorrhoea .. .. ..	2,873	32	15,877	-
(c) Other venereal diseases .. .. ..	458	1	1,622	-
23. Yellow fever .. .. ..	10	8	6	2
24. Malaria :—				
(a) Benign .. .. ..	4	-	1	-
(b) Subtertian .. .. ..	2,147	41	22,609	1
(c) Quartan .. .. ..	2	-	15	-
(d) Unclassified .. .. ..	1,882	45	24,085	-
25. Blackwater fever .. .. ..	26	8	8	96718
26. Kala-azar .. .. ..	4061	-	1	-
27. Trypanosomiasis .. .. ..	1,180	48	2,396	2
<i>Carried forward</i> .. ..	17,291	750	91,794	15

Disease		Total In-patients treated	Total Deaths in In-patients	Total Out-patients	Total Deaths in Out-patients
<i>Brought forward</i>	.. ..	17,291	750	91,794	15
28. Yaws	.. .. ..	589	1	34,088	-
29. Other protozoal diseases	.. ..	-	-	5	-
30. Ankylostomiasis	.. .. ..	1,601	17	1,429	-
31. Schistosomiasis	.. .. ..	627	12	910	-
32. Other helminthic diseases	.. ..	1,572	9	33,789	-
33. Other infectious or parasitic	diseases	1,220	45	4,434	-
34. Cancer and other tumours :—					
(a) Malignant	.. .. ..	122	29	45	-
(b) Non-malignant	.. .. ..	541	25	1,007	-
(c) Undetermined	.. .. ..	108	2	208	-
35. Rheumatic conditions	.. .. ..	1,219	6	40,100	-
36. Diabetes	.. .. ..	84	18	58	-
37. Scurvy	.. .. ..	6	1	12	-
38. Beriberi	.. .. ..	51	6	677	-
39. Pellagra	.. .. ..	8	-	130	-
40. Other diseases :—					
(a) Nutritional	.. .. ..	36	-	1,120	-
(b) Endocrine glands and general		104	9	544	-
41. Diseases of the blood and blood-forming organs		930	64	9,857	3
42. Acute and chronic poisoning	.. ..	23	4	14	-
43. Cerebral haemorrhage	.. ..	238	42	227	1
44. Other diseases of the nervous system		1,226	126	5,068	9
45. Trachoma	.. .. ..	25	-	176	-
46. Other diseases of the eye and annexa		1,345	7	17,540	-
47. Diseases of the ear and mastoid sinus		283	2	12,568	-
48. Diseases of the circulatory system :—					
(a) Heart	.. .. ..	640	166	1,019	4
(b) Other circulatory diseases	.. .. ..	1,408	39	5,405	-
49. Bronchitis	.. .. ..	2,315	50	48,798	12
50. Pneumonia :—					
(a) Broncho-pneumonia	.. .. ..	718	215	298	10
(b) Lobar-pneumonia	.. .. ..	1,320	249	305	4
(c) Otherwise defined	.. .. ..	-	-	-	-
51. Other diseases of the respiratory system		708	31	9,656	-
52. Diarrhoea and enteritis :—					
(a) Under 2 years of age	.. .. ..	105	17	2,544	9
(b) Over 2 „ „ „	.. .. ..	903	83	13,653	1
53. Appendicitis	.. .. ..	114	6	42	-
54. Hernia, intestinal obstruction	.. ..	1,693	106	1,565	1
<i>Carried forward</i>	.. ..	39,173	2,137	339,085	69

Disease	Total In-patients treated	Total Deaths in In-patients	Total Out-patients	Total Deaths in Out-patients
<i>Brought forward</i> .. ..	39,173	2,137	339,085	69
55. Cirrhosis of the liver .. ..	93	24	44	-
56 Other diseases of the liver and biliary passages	586	46	829	-
57. Other diseases of the digestive system	2,556	77	66,496	2
58. Nephritis :—				
(a) Acute .. .. ..	165	34	159	-
(b) Chronic .. .. ..	207	47	212	-
59. Other non-venereal diseases ..	3,373	88	14,601	-
60. Diseases of pregnancy :—				
(a) Abortion .. .. ..	440	6	571	-
(b) Ectopic gestation .. ..	16	2	28	-
(c) Toxaemias .. .. ..	406	30	438	1
(d) Other .. .. ..	4,700	68	315	-
61. Diseases of the skin, cellular tissue, bones and organs of locomotion	8,292	153	157,204	-
62. Congenital malformations and diseases of early infancy :—				
(a) Congenital debility .. ..	352	85	1,402	8
(b) Premature birth .. ..	164	15	8	-
(c) Injury at birth .. ..	7	-	8	-
63. Senility .. .. ..	38	10	77	-
64. External causes :—				
(a) Suicide .. .. ..	24	9	5	1
(b) Other forms of violence ..	6,877	232	68,964	2
65. Ill-defined .. .. ..	585	64	4,263	2
<b>Total</b> .. .. ..	<b>68,054</b>	<b>3,127</b>	<b>654,709</b>	<b>85</b>



## APPENDICES

### APPENDIX A

#### LABORATORY SERVICE

At the Medical Research Institute the production of anti-variolar, anti-rabies and T.A.B. vaccines was maintained. The examination of specimens in connection with rabies, yellow fever, typhoid, tuberculosis, the dysenteries and malignant disease was continued.

The investigation into the causes of infant mortality proceeded throughout the year.

The laboratories at Lagos, Port Harcourt, Kano, Kaduna, Zaria, Jos dealt with routine clinical work.

The laboratory at Lagos was in charge of a Pathologist, that at Port Harcourt, a Laboratory Superintendent and the remainder, Technical Assistants.

### APPENDIX B

#### REPORT OF THE SLEEPING SICKNESS SERVICE, 1939

The onset of war led to changes which otherwise might not have been necessary for some time. Gadau has been closed. Research will be limited to testing new drugs. Re-surveys have shown that the incidence of infection in the main central epidemic belt is now only about a ninth of the old figure. This made it possible to reduce the number of teams to three, setting free both European and African trained staff for the Field Ambulance. The dispensary system is being expanded and improved to compensate for the reduction in mass treatment.

2. Experimental work at Gadau was carried on until the end of the year. Investigations into the character of local trypanosome strains, and associated problems, the testing of new drugs and entomological work were continued. A number of scientific papers have been prepared for publication.

3. During the year 494,428 people were examined by the teams and 20,054 cases found, an average of 4.0 per cent. The progressive fall in the average infection rate, has been maintained. A further 8,035 cases were treated at sleeping sickness dispensaries and 2,001 at general medical stations, giving a total for the year of 30,090.

4. Among people examined in new areas there were 18,105 cases an infection rate of 6.7 per cent. The majority were found in Benue Province where little work had been done prior to 1938. The rates there are comparable with the old high figures of the earlier years of the mass treatment system. At re-surveys 1,946 cases were found, an infection rate of 0.88 per cent. This compares favourably with the average of 8.1 per cent found at the first surveys of the same areas.

5. An indication of what has been accomplished in recent years is given by the population figures of Zaria Emirate. During 1933-1937 some 78,000 cases were treated in mass campaigns, started because of the high incidence of the disease and progressive depopulation. During 1923-1933 the number of adult males had fallen by 12 per cent. There is evidence that this decrease was correlated directly with the incidence of sleeping sickness. In 1933 the total population was 373,195. By 1937 it had increased to 402,257 and to 418,037 in 1939. There is now only a fraction of the old amount of sleeping sickness,

6. The system of control of mining labour in parts of Plateau Province continued to give good results. The incidence of the disease among labourers on the Kabba-Ilorin goldfields is causing concern. Whereas the infection among the general population is only 1.3 per cent and is of a mild type, it is about 40 per cent among the mining labourers. As the disease is of a more virulent type and mining only started in 1938, it seems clear that it was brought into the district by labourers from further North.

7. Good progress has been made in the settlement schemes, though shortage of staff was a handicap. The bulk of the preliminary work has been done. The tsetse-free corridor, when completed, will include an area of about 680 square miles in which 70,000 people and their domestic animals will be safe from trypanosomiasis. It is being linked with the railways and fly-free trade routes. Neighbouring districts are being protected by communal clearing campaigns.

8. Originally it was thought that many thousands of people might have to be moved into the corridor; but further investigations have shown that limited clearing will free the northern part from tsetse without moving many villages. Most of the tributary streams dry up during the dry season. A series of barrier clearings are being made to prevent tsetse spreading back during the rains from permanent foci on the main rivers. The fly can then be easily eradicated from the isolated tributary streams. It will not now be necessary to move more than 5,000 to 10,000 people. Arrangements were completed for the settlement of thirty-four outlying hamlets into eighteen new villages. Concrete wells have been put in and new villages are being built. In order to improve the appalling squalor of old Anchau town, 600 people have been moved out into a model town.

9. Already more than half the corridor has been freed from tsetse. Much agricultural and other investigations have been carried out and these enable land for the new settlements to be chosen with a confidence that it will be both adequate and good. Efforts are being made to develop the cattle industry in the area and to improve farming methods.

G. B. WALKER,  
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